

ABSTRACT OF THE DISCLOSURE

In an array of acoustic resonators, the resonant frequencies of the resonators are adjusted and stabilized in order to achieve target frequency responses for the array. The method of adjusting is achieved by intentionally inducing oxidation at an elevated temperature. Thermal oxidation grows a molybdenum oxide layer on the surface of the top electrode of an electrode-piezoelectric stack, thereby increasing the relative thickness of the electrode layer to the piezoelectric layer. In one embodiment, the resonant frequency of an FBAR is adjusted downwardly as the top electrode layer increases relative to the piezoelectric layer. In another embodiment, the method of stabilizing is achieved by intentionally inducing oxidation at an elevated temperature.

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